

**REDESCRIPTION AND REVIEW ON THE ECOLOGY OF RARE
AND ENDANGERED BIRD JERDON'S OR DOUBLE BANDED
COURSER, *CURSORIUS BITORQUATUS* (BLYTH)
FROM SRI LANKA MALLESWARA WILDLIFE SANCTUARY,
ANDHRA PRADESH**

B. ANAND MOHAN* AND B. BHARATHA LAKSHMI**

Introduction

Jerdon's or Double-banded Courser, *Cursorius bitorquatus* was first discovered by (Blyth, 1848) and recorded for science by Dr. T.C. Jerdon from the hilly country above the Eastern Ghats of Nellore and in Cuddapah (Jerdon, 1877). Blandford (1889) recorded near Sironcha and Bhadrachalam near the Godavari river valley in northern Andhra Pradesh. The last presumably authentic record was by Howard Compell in 19th century in the Pennar river valley near Anantapur (Ali, 1977). It was widely believed to be extinct since then. The 19th century record in Anantapur being the last led to the Double-banded Courser being considered as one of the rarest avian species of the world. The survey by Bombay Natural History Society, 1975 and 1976 with the collaboration of Smithsonian Institution and World Wildlife Fund of India respectively did not achieve positive results (Ali, 1977).

The Bombay Natural History Society, under the aegis of its research project "Study of the ecology of rare and endangered species of wildlife and their habitat" funded by U.S. Fisheries and Wildlife Service, through the Department of Environment,

Government of India, has conducted the survey of Jerdon's Courser. Under the programme, in 1985 it surveyed the Pennar river valley areas in southern A.P. and tried to establish whether the Double-banded Courser is still present or extinct in these areas. Towards the end of 1985 preliminary survey (Bhushan, 1985a, b) was carried out over the Pennar river course and its adjoins and spot survey locations were conducted till Feb. 1986 and also surveyed the habitat of Double-banded Courser. Finally in 1986, the survey established the presence of the species in the scrub jungles of Reddipalle village of Cuddapah District of Andhra Pradesh (Bhushan, 1986) and reported rediscovery of the Double-banded Courser, found to inhabit rocky and undulating ground with thin forest. Jerdon (1877) believed the Double-banded Courser to be a mountain form of *Cursorius*, frequenting rocky hills with thin jungle. Blandford (1889) recorded the species in thin forest or high scrub, never in open ground. He never saw any on hills in contrast to Jerdon's belief. Bhushan (1986) found to inhabit rocky and undulating ground, where as in the present observation it is found that the saline open degraded plains with thin short grass and bouldary patches in the scrub jungle of Sri

* Curator, Indira Gandhi Zoological Park, Visakhapatnam (Andhra Pradesh)

** Associate Professor, Department of Zoology, Andhra University, Visakhapatnam (Andhra Pradesh)

Lanka Malleswara Sanctuary is the ideal habitat.

Description

Cursorius bitorquatus (Blyth)
(Fig. 1 and 2).

Telugu name : Kalivi Kodi.

Size : Patridge ±.

Field Characters : Upper parts grey plumage, crown and hind neck black. Yellow beak with black tip. Chin and throat whitish; abdomen is whitish in colour. A white patch around the eyes. Fore-neck rufous, separated from breast by a white band. Second white band across lower breast. Presence of double bands on the neck region diagnostic. It differs from the Indian or Single-banded Courser by its prominent double band and its nearest relations are African. A conspicuous white ring with a prominent white arrow head marking or a mesial line in the centre of the black crown diagnostic. The mesial line or arrow marking is presumed to be the indication of sex. Male is little bigger than the female. A white wing bar is prominent in flight. Grey wing margined with black and white in between. Tail white and black. Long bare pale yellow 'thick kneed' legs.

Distribution : Indigenous to Andhra Pradesh, restricted to Cuddapah in Sri Lanka Malleswara Sanctuary, Jerdon's Courser is one of the rarest birds. It represents an interesting case of bird species believed to be extinct and not recorded since 19th century, but was rediscovered in January 1986 in the scrub jungles of Reddipalle village of Cuddapah District. The open saline degraded plains with thin, short grass and bouldary patches

in the scrub jungles of Sri Lanka Malleswara Sanctuary is the ideal habitat for the bird.

Habit : Solitary, never found in pairs, nocturnal, shy creatures.

Food : Omnivorous, earthworms, termites, black ants, grains, fruits like *Carissa* etc. and new flush of grass blades.

Call : Little similar to yellow wattled lapwing, in a slow pitch.

Nesting : June to August.

Field Observations

During field surveys its occurrences were noticed only in few restricted pockets (estimated number of birds 30-40) especially in the peripheral scrub open areas of Konduru forest beat of Siddhotum range preferably in 200 ± 40 m elevation in Sri Lanka Malleswara Sanctuary. The efforts to locate the bird in similar habitat adjoining the area have not yielded much success except noticing them twice, in two similar patches in the adjoining forest area near Badvel-Mydukur road.

During field trips mostly one or two were seen solitarily. In one occasion five birds were seen in different places in 2 hours time in an area of 2 km². Sighting of Jerdon's Courser is preferable in the month of August (post-monsoons), when termite activity was more and with more new flush of grass blades. Nocturnal, preferably seen in dark nights especially on new moon day. The birds can be seen without much effort on new moon days. Other than new moon days the birds were seen at 3 A.M. to 4 A.M. when it is dark. Young ones (2 to 3 months old) are seen in the months of August and September. At times they camouflage

Fig. 1

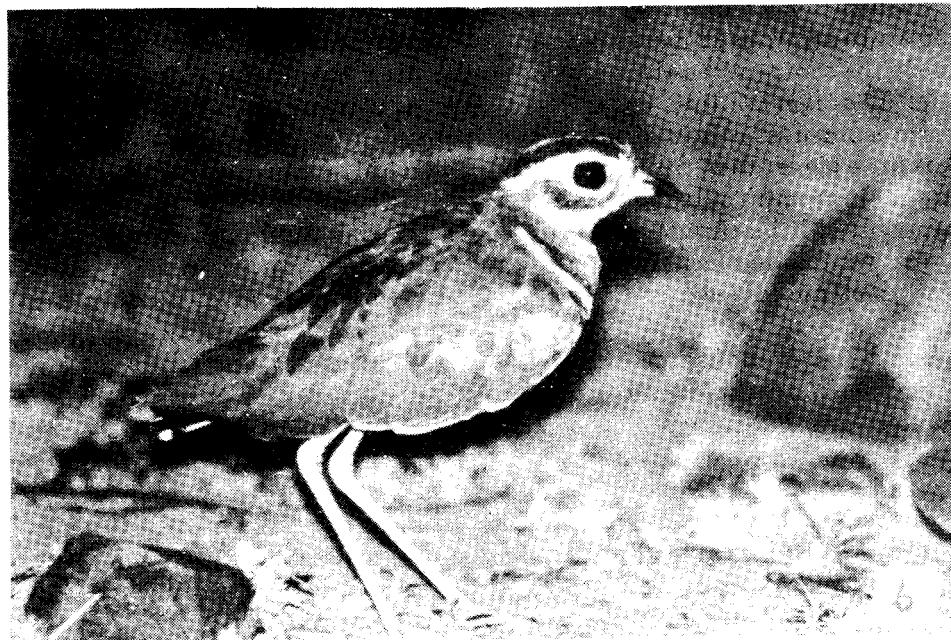
(a) Jerdon's Courser *Cursorius bitorquatus* in the open scrub(b) Jerdon's Courser *Cursorius bitorquatus* in the dry boundary area

Fig. 2



(a & b) Jerdon's Courser *Cursorius bitorquatus* with conspicuous white ring and different markings in the centre of the black crown (Presumptive indication of sex)

themselves in rocks. In the month of May on two occasions birds were seen in pairs (may be breeding time). One of the authors (BAM, a Dy. CF, based at Tirupathi) is credited with taking the first photograph of the live bird (*The Hindu* 16/4/1994).

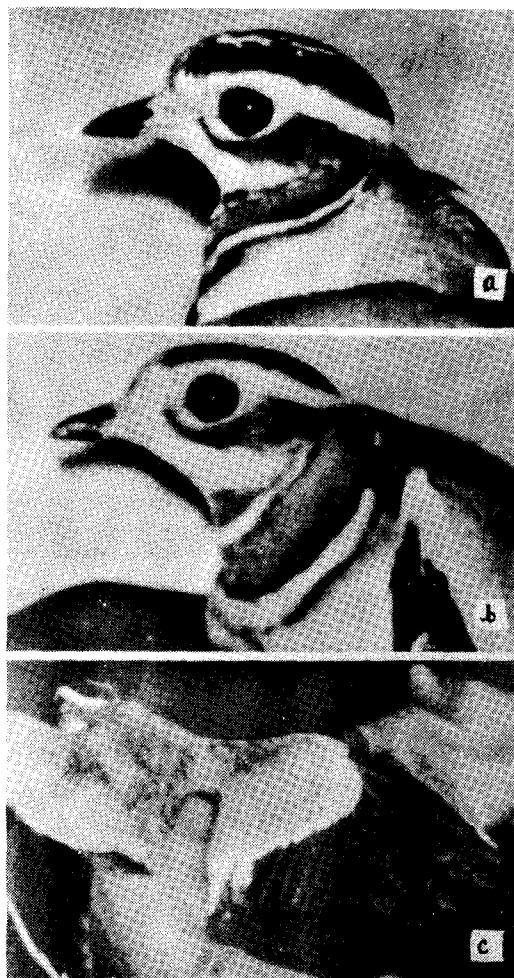
During the field visits a bird was rescued when it was found entangled in a thorny bush and the same was released back into its habitat (Fig. 3). During the field visits it is observed, that in the glare of the torch-beam most often birds will be motionless and confused and moreover the young specimens approach the source of light. Perhaps the poachers took advantage of this character for its flesh which was believed to be an aphrodisiac. It was may be due to this reason only that the bird reached endangered status.

Ecology

Jerdon's Courser prefers small open saline degraded plains with thin, short grass and bouldary patches in the scrub forests with both thorny and non-thorny tree growth. The thorny scrub mainly consists of *Acacia* species, *Prosopis juliflora*, and *Carissa carandus* and other species viz. : *Gymnosporia montana*, *Randia spinosa* etc. Non-thorny scrub was made of mainly *Anogeissus*, *Hardwickia binata* etc.

It spends its time preferably in *Carissa carandus* bushes locally known as Kalimi. Hence the bird is locally called as Kalimi or Kalivi Kodi. Other species found in the habitat are: *Dichrostachys cinerea*, *Dodonea viscosa*, *Pavotia indica*, *Canthium dicoecium*, *Diospyros ferrea*, *Wrightia arborea*, *Zizyphus mauritiana*. Similar habitat continues North from Reddipalle and continued towards Badvel and adjoining areas (Fig. 4 and 5).

Fig. 3

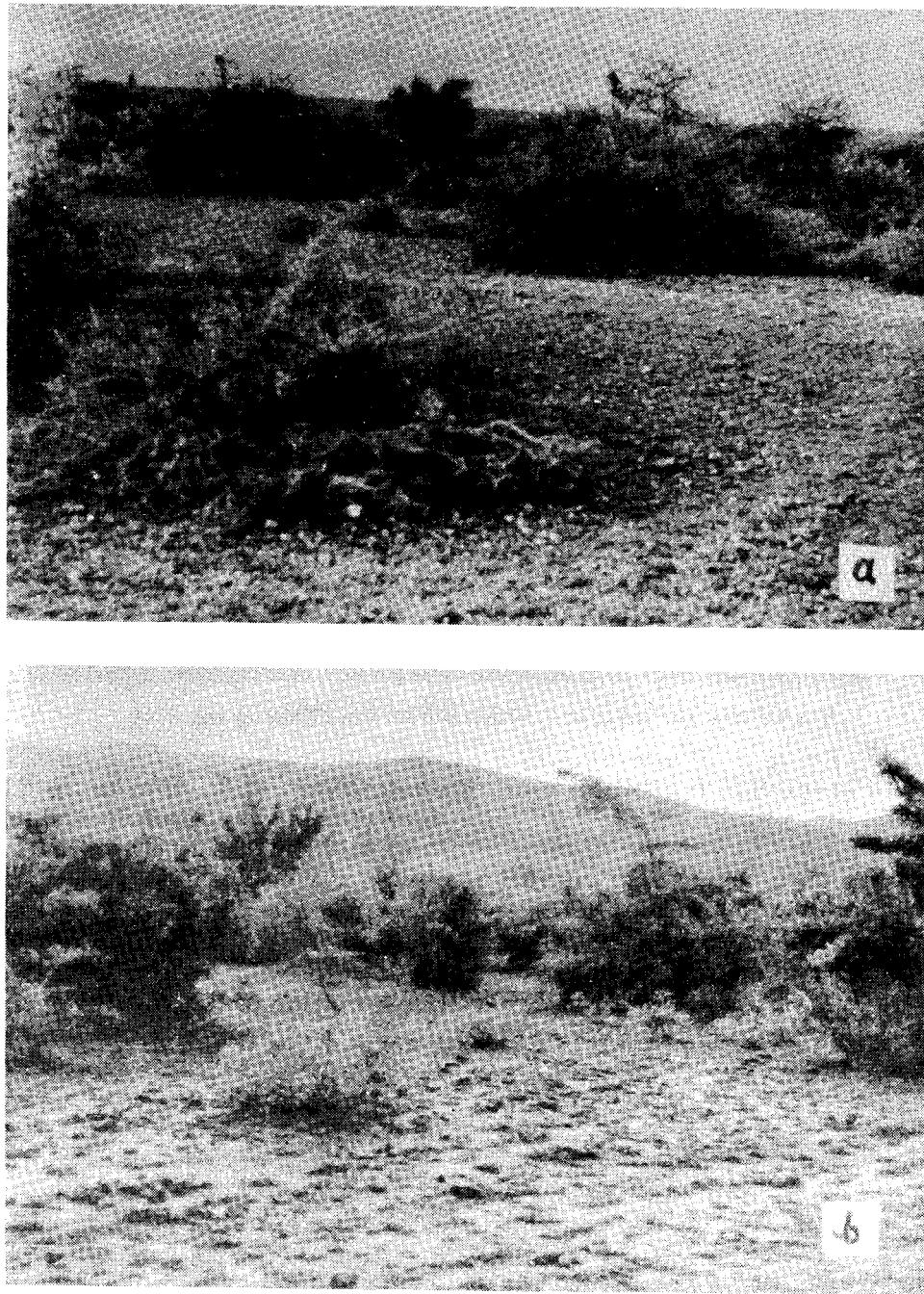


(a-c) Diagnostic crown mark, double bands and colouration of wings

Discussion

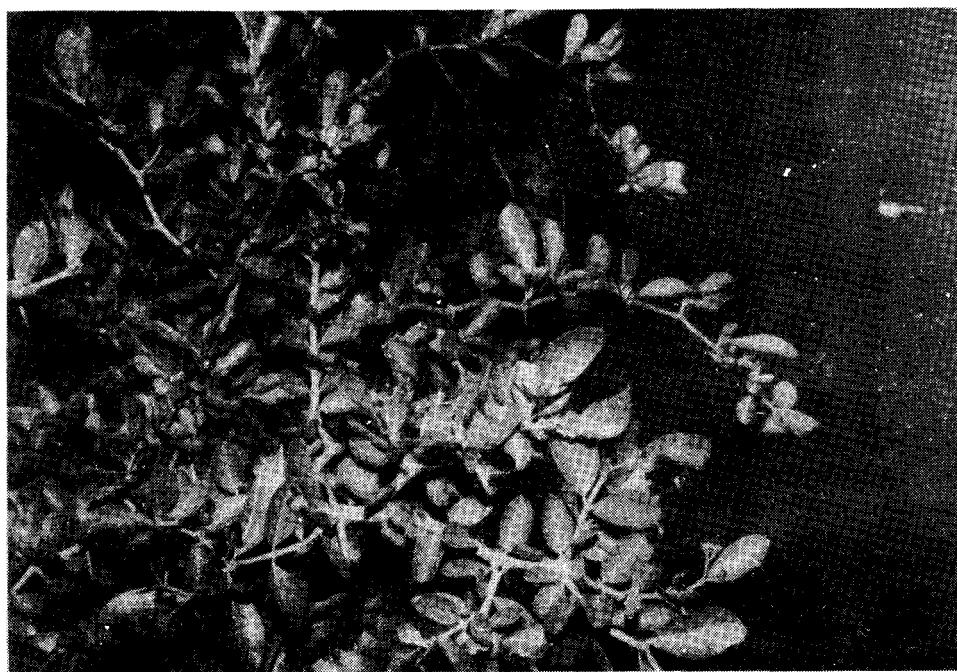
Possible locations of Double-banded Courser were surveyed during several field visits and records were established of definite field characters. The specific locations, distribution, feeding, call, nesting

Fig. 4



(a & b) The habitat of Jerdon's Courser *Cursorius bitorquatus*

Fig. 5



The *Carissa caranda* bush, which the Jerdon's Courser inhabits

season and habits of *C. bitorquatus* were recorded.

The specimens agree with original description and in the present observation a note was given on conspicuous white ring and arrow head marking or mesial line in the centre of the black crown along with diagnostic double bands in addition to the description of flight feathers and also the recorded feeding, call, habits and nesting. Being rare and confined to Sri Lanka Malleswara Sanctuary, the description given will be helpful for its proper identification and taxonomic classification.

Conspicuous white ring around the crown with mesial line is diagnostic and disagrees with Ali's presumptive

description and Bhushan's (1986) description of white broad supercilium from lores to nape. The legs long, bare, pale yellow, thick kneed, disagree with the description given by Bhushan (1986).

Suggested measures for the conservation of the species

1. Steps may be taken to conserve the fragile ecosystem of the habitat with scientific approach. The area is frequented by grazing cattle. Though there is possibility of trampling of Jerdon's Courser's eggs by cattle, the height of the grass is checked. Hence an in-depth study on the ecology of the bird species will be helpful for its conservation.

2. The boulders should be kept as they are, particularly in the patches near Reddipalle scrub open lands, as the boulders may be protecting the eggs laid by Jerdon's Courser from trampling by the grazing village cattle. The scrub plains of Sri Lanka Malleswara is an idea habitat of this bird.
3. Action may be taken for establishing the ecological role of the species.
4. Strict protection to the bird and its habitat be given prime importance. Disturbance and destruction to the habitat be completely avoided.
5. Captive breeding programme study on the bird species Indian Courser be attended at first for attempting captive breeding programme on Jerdon's Courser.

Acknowledgements

One of the authors (B. Anand Mohan) is thankful to the Chief Wildlife Warden, A.P. for the facilities granted and constant encouragement; Sri Mallappa, forest range officer and Sri Aitanna, reserve watcher for their help and assistance, for spotting the bird during field visits. Thanks are due to Mrs. Radha Anand Mohan for her help during the field study.

SUMMARY

The Jerdon's or Double-banded Courser *Cursorius bitorquatus* last recorded in nineteenth century, is one of the rarest birds in the world. This bird is indigenous to Andhra Pradesh and is restricted to Sri Lankamalleswara Wildlife Sanctuary of Cuddapah District. This rare bird, believed to be extinct, has been rediscovered and found to be surviving in restricted habitats and in small populations. Surveys carried out in 1985 and 1986 finally established the presence of the species in the scrub jungles near Reddipalle village of Cuddapah District (Andhra Pradesh). In the present article redescription and review on the ecology with some more new findings are discussed.

श्री लंकमल्लेश्वर वन्यप्राणि अभयारण्य, आंध्र प्रदेश में दुर्लभ और संकटापन्न पक्षी जोर्डन की अथवा दुहरी पटटी वाली क्षिप्रचला, कुर्सोरियस बाइटोरक्वेट्स, (ब्लायथ) का पुनर्वर्णन
और उसकी पारिस्थिकी की समीक्षा
बी. आनन्द मोहन व बी. भारतलक्ष्मी
सारांश

जोर्डन की अथवा दुहरी पटटी वाली क्षिप्रचला, कुर्सोरियस बाइटोरक्वेट्स का विगत अन्तिम उल्लेख उन्नीसवीं शताब्दी का है जिसमें उसे संसार का दुर्लभतम् पक्षी कहा गया है। यह पक्षी आंध्र प्रदेश का देशज है और कुडप्पा ज़िले के श्री लंकमल्लेश्वर वन्यप्राणि अभयारण्य में ही पाया जाता है। यह दुर्लभ पक्षी है जिसे समाप्त हो चुका विश्वास किया जाता है पर इसे अब पुनः खोज लिया गया है और कुछ सीमित प्राकृतावासों और कन संख्या में जीवित बचा पाया गया है। 1985 और 86 में किए गए सर्वेक्षणों ने अन्तिम रूप से इस जाति का आंध्र प्रदेश के जिला कुडप्पा के ग्राम रेडिपल्ली के निकट वाले कंटक वनों में होना स्थापित कर दिया है। प्रस्तुत अभिपत्र में कुछ नई जानकारियाँ देते हुए इसका पुनर्वर्णन और इसकी पारिस्थिकी की समीक्षा की गई है।

References

- Ali, Salim (1941). *The book of Indian birds*. BNHS-Oxford 4th edn. 1946 and 12th edn. 1996 - Centenary edition revised and enlarged, Oxford University Press, Mumbai.
-(1977). President's letter : "Mystery" birds of India-2 : Jerdon's or Double-banded Courser. *Hornbill*. Oct.-Dec. : 5-7.
- Ali, S. and S.D. Ripley (1969). *Handbook of the Birds of India and Pakistan* Vol. 3 : 11-12. Compact Edition. Oxford University Press.
-(1983). *A Pictorial Guide to the Birds of the Indian Subcontinent*. Oxford University Press, Bombay.
- Bhushan, B.(1985a). Jerdon's or Double-banded Courser *Cursorius bitorquatus* (Blyth) - Preliminary Survey : Pennar river valley areas. Andhra Pradesh. *Technical Report No. 9, Endangered Species Project*. Bombay Natural History Society, Bombay.
-(1985b). Jerdon's or Double-banded Courser *Cursorius bitorquatus* (Blyth) - Preliminary Survey : Pennar river valley areas. Andhra Pradesh. Surveys and Discussion. : 'The Floricans' Annual Report 1984-85. Endangered species Project. Bombay Natural History Society, Bombay.
-(1986). Rediscovery of the Jerdon's or Double banded Courser *Cursorius bitorquatus* (Blyth), Aug. *Jour. Bom. Nat. Hist. Soc.*
- Blandford, W.T. (1889) .*The Fauna of British India*. Birds. Vol. IV. Taylor and Francis, London.
- Blyth, E. (1848). Proceedings of the Asiatic Society - Report of the Curator, Zoological Department. *Jour. Asiatic Soc. Bengal. xvii* (1) : 254.
- Jerdon, T.C. (1877). *The Birds of India*. Vol.II, Part II. Calcutta. pp. 626-629.
-